

IN THE CLAIMS:

The following list of claims will replace all prior versions and listings of claims in the application.

- 5 1. (currently amended) A phase noise fine tuning electronic device comprising:
- a plurality of circuit units of a voltage control oscillator, wherein the voltage control oscillator includes a resonance circuit, a coupling circuit, and an oscillating circuit;
- 10 a first conductive layer for placing the plurality of circuit units, wherein a plurality of micro-strips of the conductive layer are patterned for connecting the plurality of circuit units;
- a second conductive layer; and
- a first insulation layer placed between the first conductive layer
- 15 and the second conductive layer, the first insulation layer having a first opening filled with conductive material ~~for connecting,~~
- wherein a first lower micro-strip patterned in the second conductive layer ~~and,~~ a first upper micro-strip patterned in the first conductive layer ~~such that the first lower micro-strip, the first upper~~
- 20 ~~micro-strip,~~ and the insulation layer together form an adjustable capacitor of the coupling circuit, whereby phase noise of the voltage control oscillator is diminished by cutting the first upper micro-strip to change capacitance of the adjustable capacitor.

2. (original) The electronic device of claim 1, wherein one end of the adjustable capacitor is connected to the resonance circuit and the other end of the adjustable capacitor is connected to the oscillating circuit.

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3. (currently amended) The electronic device of claim 2, wherein a second upper micro-strip is patterned in the first conductive layer, and a second lower micro-strip overlapping the second upper micro-strip is patterned in the second conductive layer such that the
10 second upper micro-strip, the second lower micro-strip, and the insulation layer together form a second adjustable capacitor connecting to an inductor of the resonance circuit so that an electronic characteristic of the resonance circuit is adjusted by partially cutting the second upper micro-strip, and wherein the
15 second adjustable capacitor ~~generates inductance to decrease~~ a resonance frequency of the resonance circuit ~~by cutting when~~ the second upper micro-strip is cut in a first direction, and capacitance of the second adjustable capacitor is decreased to increase the resonance frequency of the resonance circuit ~~by cutting when~~
20 second upper micro-strip is cut in a second direction, whereby an oscillating frequency range of the voltage control oscillator is fine tuned.

4. (original) The electronic device of claim 3, wherein two ends
25 of the second adjustable capacitor are respectively connected to the

inductor and ground.

5. (original) The electronic device of claim 4, further comprising a third conductive layer and a second insulation layer, wherein the
5 second insulation layer is placed between the second conductive layer and the third conductive layer, the second insulation layer has an second opening filled with conductive material and the third conductive layer is connected to ground for grounding the plurality of circuit units in the first conductive layer and the second conductive
10 layer.

6. (currently amended) A phase noise fine tuning electronic device comprising:

a plurality of circuit units of a voltage control oscillator,
15 wherein the voltage control oscillator includes a resonance circuit, a coupling circuit, and ~~a~~an oscillating circuit;

a first conductive layer for placing the plurality of circuit units, wherein a plurality of micro-strips are patterned in the first conductive layer for connecting the plurality of circuit units;

20 a second conductive layer; and

a first insulation layer placed between the first conductive layer and the second conductive layer, wherein a first upper micro-strip patterned in the first conductive layer, a first lower micro-strip patterned in the second conductive layer, and the first insulation
25 layer together forms a first adjustable capacitor connected to an

inductor of the resonance circuit, and wherein the first upper micro-strip is cut in a first direction to decrease a resonance frequency of the resonance circuit, and capacitance of the first adjustable capacitor is decreased ~~by cutting~~when the first upper
5 micro-strip is cut in a second direction to increase the resonance frequency of the resonance circuit whereby oscillating frequency range of the voltage control oscillator is fine tuned.

7. (original) The electronic device of claim 6, wherein two ends
10 of the first adjustable capacitor are respectively connected to the inductor and ground.

8. (original) The electronic device of claim 7, further comprising a third conductive layer and a second insulation layer, wherein the
15 second insulation layer is placed between the third conductive layer and the second conductive layer, the second conductive layer has a second opening filled with conductive material, and the third conductive layer is connected to ground for grounding the plurality of circuit units in the first conductive layer and the second conductive
20 layer.

9. (original) The electronic device of claim 8, wherein a second upper micro-strip is patterned in the first conductive layer to be used in the coupling circuit, and a second lower micro-strip overlapping
25 the second upper micro-strip is patterned in the second conductive

layer so that the second upper micro-strip, the second lower micro-strip, and the first insulation layer together form a second adjustable capacitor, whereby phase noise of the voltage control oscillator is decreased when fine tuning the voltage control oscillator
5 by partially cutting the second upper micro-strip to adjust capacitance of the second adjustable capacitor of the coupling circuit.

10. (original) The electronic device of claim 9, wherein two ends of the second adjustable capacitor are connected to the resonance
10 circuit and the oscillating circuit respectively.